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NOTES ON THE CLASSIFICATION OF THE STAPHYLINID
BEETLES OF THE GROUPS LISPINI AND OSORIINAE

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Two groups of Staphylinidae that have not seemed entirely satisfactory in our classification of the family Staphylinidae are the Lispini and the Osoriini. In each case there has been uncertainty as to the relationships, as shown by rather veiled suggestions that each is not entirely satisfactory where it has been placed.

The group Lispini has been placed as a subtribe of the tribe Piestini or as a tribe (Lispinini) of the subfamily Piestinae. The Piestinae has not been found to be a homogeneous group and has been very difficult to define. In recent works this has led to the inclusion of the Piestinae in the Oxytelinae as the tribe Piestini, but in this position it merely adds to the heterogeneity of the Oxytelinae. The group Osoriinae has nearly always been placed in the Oxytelinae, usually as a tribe. It agrees with typical oxytelines in relatively few characters and adds to the difficulty of defining that group.

During recent studies in the Piestinae it was found that the Piestinae can be separated into two groups by use of the character of the presence or absence of paratergites on the abdomen (abdomen margined or not). This appears to be a fundamental character. When it was recalled that the Osoriini may also be separated from the other Oxytelinae by the same character, it was obvious that a comparison of the two groups might lead to further discoveries.

Examination of the Osoriinae and Piestinae shows that five groups are extremely similar in most respects of their morphology as well as in a certain constant appearance. These are the Lispinini, Leptochirini, Thoracophorini, Osoriini, and Eleusii. These form a relatively homogeneous group immediately recognizable by the complete absence

of abdominal paratergites (margining). This character will distinguish them at once from all other Staphylinidae (except possibly some of the highly specialized inquilines). The only character found that will distinguish the Osoriini from the other four groups is the presence of a transverse sulcus on the anterior coxa. It is therefore concluded that these groups must all be placed in one subfamily, which will properly be called the Osoriinae. This group has nothing to do with the Oxytelinae, and while at present it must be placed after that subfamily, future rearrangements in the family are certain to separate them widely.

If this character of the coxal sulcus be used as the primary basis for dividing the subfamily, one gets two groups, the Osoriini and the remainder, the latter being separable on the closure of the coxal cavities into Leptochirini and Lispinini. These three tribes will then comprise the subfamily Osoriinae.

KEY TO TRIBES OF OSORIINAE

- | | |
|---|--------------|
| 1. Anterior coxa conical, prominent, and with a transverse sulcus on anterior face..... | OSORIINI |
| Anterior coxa usually small, globose, never with a transverse sulcus..... | 2 |
| 2. Anterior coxal cavities closed behind..... | LEPTOCHIRINI |
| Anterior coxal cavities open behind..... | LISPININI |

In the Lispinini there are two groups of genera that have been rather heterogeneous. In each group there were some genera having the anterior coxae separated by a spatulate process of the prosternum and some not. It seems certain that we are here dealing with a group in which similar appearance has arisen in several stocks. This parallelism is very confusing if only specific characters or general facies are observed. However, the lumping of all these genera and then their initial segregation on the character of the separation of the anterior coxae gives us two groups that while somewhat heterogeneous in appearance are much more homogeneous structurally than those obtained by the previous method. This division of the groups seems to be an important one, and the character is more usable than that of the shape and size of the coxae, with which it is correlated. The use of this character of the separation of the coxae, along with the others, enables us to divide the tribe into five subtribes.

KEY TO SUBTRIBES OF LISPININI

- | | |
|---|--------------|
| 1. Anterior coxae separated by a flat process of prosternum..... | 4 |
| Anterior coxae not separated (except sometimes narrowly under the coxae)... | 2 |
| 2. Pronotum half as wide at base as apex..... | ELEUSHI |
| Pronotum not so much narrowed at base..... | 3 |
| 3. Gular sutures widely divergent posteriorly..... | THORACOPHORI |
| Gular sutures absent, united, or approximate throughout..... | PARALISPINI |
| 4. Head narrowed to a neck behind..... | CALOCERI |
| Head not forming a neck..... | LISPINI |

The relationships of these subtribes cannot be determined by their general appearance, since some Lispini are very similar to some Paralispini; the Caloceri are somewhat like the Thoracophori; and some Paralispini are said to be similar to some Thoracophori. The actual classification based on species available is given later in this paper, and an outline is presented here:

Subfamily OSORIINAE

Tribe LISPININI

Subtribe LISPINI

Subtribe CALOCERI

Subtribe THORACOPHORI

Subtribe ELEUSII

Subtribe PARALISPINI

Tribe LEPTOCHIRINI

Tribe OSORIINI

The subtribes Lispini and Paralispini (together the subtribe Lispini of Bernhauer and Schubert) are the only ones of which a study of the genera has been attempted in this paper. In the Paralispini I recognize four generic names, *Ischiopsaurus*, *Lispinodes*, *Neolispinus*, and *Paralispinus*. Of *Paralispinus* I have seen several species, but of the other three genera no examples have been available. The original descriptions do mention the characters necessary to allow a reasonable assurance that the genera are properly placed here, but it has not been found practicable to write a useful key to these genera. The genus *Paralispinus* occurs throughout the world (at least the warmer parts), *Neolispinus* occurs in the Malay Peninsula, *Lispinodes* has been recorded from the Indo-Malayan region, Hawaii (and South America), and *Ischiopsaurus* from Madagascar and the Philippine Islands.

After the removal of the four genera to the Paralispini, the Lispini is left with three valid names, *Holosus*, *Lispinus*, and *Pseudolispinodes*. These three are all represented by series of species, but, since the conception of the genera is considerably changed here from that which was formerly available, many of the species must be shifted from one genus to another. In each of these genera several groups of species can be recognized and are herein named as seven new subgenera.

KEY TO GENERA AND SUBGENERA OF LISPINI

1. Abdominal sternites with diagonal strigae..... 2
Abdominal sternites without diagonal strigae..... (*Pseudolispinodes*).. 6
2. Hypomeron with an angulate raised line from posterior corner toward coxa and then toward front corner; epipleura of elytra broader than intercoxal process of prosternum..... (*Holosus*).. 3
Hypomeron with arcuate line marked at most by difference in sculpture; epipleura not broader even near base than intercoxal process. (*Lispinus*).. 5
3. Angle of hypomeral line near coxa acute..... 4
Angle of hypomeral line near coxa right or obtuse..... subg. *Relinda*

4. Pronotum strongly narrowed in front..... subg. **Holosus**
 Pronotum distinctly narrowed behind.....subg. **Neolusus**
5. Pronotum with longitudinal depression along side from base... subg. **Lispinus**
 Pronotum with abrupt fovea at side near basal third..... subg. **Spinilus**
6. Integuments of head, pronotum, and elytra entirely impunctate, smooth,
 shining..... subg. **Nacaeus**
 Integuments of head, pronotum, and elytra more or less densely punctured or
 sculptured..... 7
7. Pronotum parallel or narrowed only in front..... subg. **Rumeba**
 Pronotum narrowed behind, usually obviously..... 8
8. Base of pronotum about three-fourths as wide as base of elytra; elytra and
 tergites without row of punctiform foveae..... subg. **Pseudolispinodes**
 Base of pronotum not less than nine-tenths as wide as base of elytra; elytra
 with two and each tergite with one pair of punctiform foveae, all in line,
 those of tergites sometimes less evident..... 9
9. Femora very much enlarged; pronotum with two large punctiform foveae
 along front margin..... subg. **Liberiana**
 Femora only moderately enlarged; pronotum without foveae along front
 margin..... subg. **Liberiella**

The groups herein outlined are characterized in part below. Synonymy has been added to the genera with discussion of certain points.

Subfamily OSORIINAE

Antennae 11-segmented, inserted under the anterior corners of the vertex, near the eyes; maxillary palpus 4-segmented, filiform; labial palpus 3-segmented; gular sutures united or closely approximated at least in part (or absent); abdomen entirely without paratergites; first and second abdominal sternites absent (*Eumalus* has some trace of sclerotization).

Tribe LISPININI

Anterior coxa usually small and globose, without a transverse sulcus on anterior face; anterior coxal cavities open behind.

Remarks.—This tribe is homogeneous in most structural characters but is readily divided into five subtribes on less important features as well as by appearance. Of these five subtribes the Caloceri and Lispini form one group, while the Thoracophori, Eleusii, and Paralispini form another.

Subtribe LISPINI

Head not forming a neck; anterior coxae separated by a flat process of the prosternum; tarsi 5-segmented (sometimes indistinctly).

Subtribe CALOCERI

Head narrowed to a neck behind; anterior coxae separated by a flat process of the prosternum.

Subtribe THORACOPHORI

Anterior coxae not separated by a flat process of the prosternum; prosternum not greatly elongate; gular sutures widely divergent posteriorly.

Subtribe ELEUSII

Head usually margined behind the eyes above; gular sutures usually widely divergent posteriorly; pronotum very much narrowed at base; prosternum sometimes very much elongate; anterior coxae small and globose, not separated by a flat process of the prosternum; tarsi 5-segmented.

Remarks.—This subtribe contains only *Eleusis* and *Eumalus*. *Triga* (*Pseudeleusis*) has the abdomen strongly margined and does not belong in this subfamily at all.

Subtribe PARALISPINI

Gular sutures absent, or approximate throughout; anterior coxae not separated by a flat process of the prosternum; tarsi 5-segmented (sometimes indistinctly).

(See remarks above.)

Tribe LEPTOCHIRINI

Anterior coxa small and globose, without a transverse sulcus on the anterior face; anterior coxae separated by a flat process of the prosternum; anterior coxal cavities closed behind; tarsi 5-segmented.

Remarks.—This tribe is well marked and easily recognizable. It contains the genera *Leptochirus*, *Borolinus*, *Priochirus*, and *Thora-cochirus*, as well as 13 other names considered to represent subgenera.

Tribe OSORIINI

Anterior coxa conical and prominent, with a transverse sulcus on the anterior face; anterior coxae separated at the height of the sternum by a narrow process of the prosternum; tarsi 5-segmented.

Genus PSEUDOLISPINODES Bernhauer

Pseudolispinodes BERNHAUER, Philippine Journ. Sci., vol. 31, p. 258, 1926.

Diagnosis.—Having the characters listed above for the subfamily Osoriinae, the tribe Lispinini, and the subtribe Lispini; pronotum more or less narrowed behind; abdominal sternites without diagonal strigae.

Remarks.—This genus was erected for three species from the Philippines (*longipennis*, *latiusculus*, and *sinuatus*) and one from East

India (*madurensis*). Both *sinuatus* and *madurensis* were originally described in the genus *Holosus*.

In the Journal of the Federated Malay States Museums in 1929 (vol. 14, p. 438) Cameron added a new species from the Malay Peninsula (*selangorensis*), and in 1930 in the Fauna of British India (Staphylinidae, vol. 1, p. 66) he transferred *bistriatus* Fauvel of the Indo-Malayan region from *Lispinodes* and placed *madurensis* Bernhauer as a synonym. Of these six names, representatives of *madurensis*, *sinuatus*, *selangorensis*, and *bistriatus* are available for study. Under the present definition of the genera of this tribe, *longipennis*, *sinuatus*, and *bistriatus* are definitely not *Pseudolispinodes* and should be transferred to *Lispinus*.

In the case of *madurensis* there have apparently been some errors and surely some uncertainty. The following review may justify the conclusion I have reached at this time:

1914. *Holosus madurensis* (Bernhauer, Verh. zool.-bot. Ges. Wien, vol. 64, p. 83), described by comparison with *Holosus sinuatus* Bernhauer from one example from "Chambaganoor (Madura, Ostindien)."

1915. *Lispinus madurensis* (Bernhauer, Ent. Blätter, vol. 11, p. 251), described by comparison with *Lispinus impressicollis* Motschulsky, from one example from "Chambaganoor (Madura, Südindien)."

1933. In the Coleopterorum Catalogus (pars 129) Scheerpeltz (following Cameron in the Fauna of British India) listed these species as follows (pp. 1010 and 1015, respectively):

Pseudolispinodes bistriatus Fauvel, 1895 (syn. *madurensis* Bernhauer, Verh. zool.-bot. Ges. Wien, vol. 64, p. 83, 1914). From "O. Ind.: Burma, Madura, Sikkim; Indo-China, Philippines, Sumatra."

Lispinus madurensis Bernhauer, Ent. Blätter, vol. 11, p. 251, 1915. From "O. Ind.: Nilgiri-Hills, Madura."

It was assumed both by Cameron and by Scheerpeltz that the two species were distinct and that they belonged in different genera. Cameron recorded that he had seen the type of *Lispinus madurensis* Bernhauer, 1915, but not of the other.

1942. Specimens labeled *Lispinus madurensis* Bernhauer from the Nilgiri Hills (identified by Dr. Cameron) are in both the Baker collection in the U. S. National Museum and in my own collection.

- (1) These specimens belong to *Pseudolispinodes* as herein defined,
- (2) They agree closely with Bernhauer's comparison of *madurensis* and *sinuatus* (1914),
- (3) They agree closely with Bernhauer's comparison of *madurensis* and *impressicollis* (1915),
- (4) They are quite distinct from *bistriatus* from several collections (including several identifications by Dr. Cameron).

From these facts I conclude that Bernhauer described his one Chambaganoor specimen twice as a new species, placing it in two distinct genera. Cameron saw the specimen with the later label of *Lispinus madurensis*, recognized more specimens in his own material from Nilgiri Hills, and then surmised that the unseen *Holosus* (by

that time *Pseudolispinodes madurensis* was identical with *bistriatus*. The synonymy of these names should be as follows:

LISPINUS BISTRIATUS (Fauvel)

Lispinodes bistriatus FAUVEL, Rev. d'Ent., vol. 14, p. 185, 1895.

Pseudolispinodes bistriatus (Fauvel) CAMERON, Fauna of British India, Staphylinidae, vol. 1, p. 66, 1930.

PSEUDOLISPINODES MADURENSIS (Bernhauer)

Holopus madurensis BERNHAUER, Verh. zool.-bot. Ges. Wien, vol. 64, p. 83, 1914.—CAMERON, Fauna of British India, Staphylinidae, vol. 1, p. 59, 1930 (as synonym of *bistriatus*).

Lispinus madurensis BERNHAUER, Ent. Blätter, vol. 11, p. 251, 1915 (as a new species).—CAMERON, Fauna of British India, Staphylinidae, vol. 1, p. 59, 1930.

Pseudolispinodes madurensis (Bernhauer, 1915) CAMERON, Fauna of British India, Staphylinidae, vol. 1, p. 59, 1930 (as synonym of *bistriatus*).—BERNHAUER, Philippine Journ. Sci., vol. 31, p. 260, 1926.

From examination of specimens available in the U. S. National Museum I am able to transfer to this genus 22 additional species, all of which were previously included in *Lispinus* or *Paralispinus*. Certain of these can be immediately recognized by a peculiar habitus and stand out from all the rest. They are here segregated as five subgenera:

Subgenus PSEUDOLISPINODES sensu stricto

Diagnosis.—Having the characters listed above for the genus *Pseudolispinodes*; integuments punctured or sculptured, not entirely smooth; pronotum distinctly narrowed behind, much narrower at base of elytra, without anterior submarginal foveae; elytra and abdominal sternites without rows of punctiform foveae; femora not or only moderately enlarged.

Remarks.—This subgenus is probably a large one. I have seen 23 species belonging to it, all of which are very similar in appearance as well as in structure.

LIBERIELLA, new subgenus

Genotype.—*Pseudolispinodes (Liberiella) cooki*, new species (see p. 86).

Diagnosis.—Having the characters listed above for the genus *Pseudolispinodes*; pronotum scarcely narrowed behind, only slightly narrower at base than elytra; elytra and abdominal sternites with a row of punctiform foveae, sometimes obsolescent on the abdomen; femora only moderately enlarged.

Remarks.—Four species from Africa appear to form an isolated group in *Pseudolispinodes*, distinguished by the form of the pronotum which imparts a distinctive appearance. Three of these species are

undescribed; the fourth (*aethiops* Eppelsheim) is known to me only from one specimen, without locality data. Rather than base a genus on a possible misidentification, I base it on one of the supposedly new species from Liberia (see description, p. 86) and list *aethiops* and the other two (undescribed) species as congeneric.

LIBERIANA, new subgenus

Genotype.—*Pseudolispinodes* (*Liberiana*) *femoralis*, new species (see p. 86).

Diagnosis.—Having the characters listed above for the genus *Pseudolispinodes*; pronotum only moderately narrowed behind, about one-tenth narrower at base than base of elytra; pronotum with two anterior submarginal foveae; elytra and abdominal tergites with a row of large punctiform foveae; femora very much enlarged (especially the posterior, which is one-fourth as broad as long).

Remarks.—Two species from Liberia are assigned to this subgenus. (One of these is described below, p. 86). They differ from the other subgenera in the enlargement of the femora and in the peculiar arrangement of the punctiform foveae of the elytra and abdomen.

RUMEDA, new subgenus

Genotype.—*Pseudolispinodes* (*Rumeda*) *lispinoides*, new species (see p. 87).

Diagnosis.—Having the characters listed above for the genus *Pseudolispinodes*; integuments punctured or sculptured, not entirely smooth; pronotum parallel or narrowed only in front.

Remarks.—This subgenus differs considerably from *Pseudolispinodes* in appearance, principally because of the shape of the pronotum and the generally greater convexity of the body. It is represented by a single species from Liberia described on page 87.

NACAEUS, new subgenus

Genotype.—*Pseudolispinodes* (*Nacaeus*) *planellus* (Sharp).

Diagnosis.—Having the characters listed above for the genus *Pseudolispinodes*; body very depressed and slender; integuments unusually shining smooth; each elytron with a single large discal puncture.

Remarks.—This subgenus is distinguished more by its appearance than by characters of morphology. It is similar to *Pseudolispinodes* except for the complete lack of sculpture, its narrow depressed form, and the rotund shape of the head. It is represented before me by two species, of which one is undescribed. *P. (N.) planellus* (Sharp) occurs in Central America, central Africa, Singapore, and the Philippine Islands. The Oriental specimens were identified as *Paralispinus*

nitidissimus Bernhauer by Bernhauer, but I am unable to distinguish them from Panama examples of *planellus*.

Examples in the Baker collection identified by Dr. Cameron as *Paralispinus exiguus* Erichson are quite distinct from that species (and genus) as it occurs at the type locality (Puerto Rico).

Genus LISPINUS Erichson

Lispinus ERICHSON, Genera et species Staphylinorum, p. 828, 1840.

Diagnosis.—Having the characters listed above for the subfamily Osoriinae, the tribe Lispinini, and the subtribe Lispini; gular sutures usually present, sometimes merely as pits; hypomeron with a raised line, which forms a right or obtuse angle near the front coxa; cavity of the mesosternum feeble with sides not elevated; abdominal sternites with diagonal strigae, which are sometimes not completely separate from the coarse punctures.

Remarks.—The removal to *Pseudolispinodes* of the species not having diagonal strigae on the sternites, to *Holosus* of those having an acute hypomeral angle, to *Relinda* of those having a modified mesosternum, and to *Paralispinus* of those with contiguous anterior coxae leaves in *Lispinus* a homogeneous series of species, of which each agrees closely with the genotype in structural characters. This series can be separated into two groups by the structure of the pronotum. The 18 species that I have examined and am placing in this genus have previously been placed there with the exception of *bistriatus* Fauvel, *longipennis* Cameron, and *sinuatus* Bernhauer, which were described and cataloged in *Lispinodes* and *Holosus*. This will probably still be a fairly large genus when all the foreign elements have been removed from it.

Subgenus LISPINUS sensu stricto

Diagnosis.—Having the characters listed above for the genus *Lispinus*; pronotum scarcely narrower at base than base of elytra; side of pronotum with a longitudinal fovea from base.

Remarks.—The typical subgenus will undoubtedly contain most of the species assigned to this genus. I have seen 16 species, which differ only slightly in appearance and not appreciably in structure.

SPINILUS, new subgenus

Genotype.—*Lispinus (Spinilus) bistriatus* (Fauvel) (see p. 81).

Diagnosis.—Having the characters listed above for the genus *Lispinus*; pronotum much narrower at base than base of elytra; side of pronotum with an abrupt fovea near basal third instead of the usual longitudinal depression.

Remarks.—This subgenus is erected for two species from the Orient (*bistriatus* and *sinuatus*), which have an unusually strongly narrowed pronotum and a different type of lateral fovea. They are readily distinguished from *Lispinus* sensu stricto.

Genus HOLOSUS Motschulsky

Holosus MOTSCHULSKY, Bull. Soc. Imp. Nat. Moscou, vol. 30, p. 496, 1857.

Diagnosis.—Having the characters listed above for the subfamily Osoriinae, the tribe Lispinini, and the subtribe Lispini; pronotum broad, strongly narrowed in front or behind; hypomeron with a raised line forming an angle near the front coxa; abdominal sternites with diagonal strigae.

Remarks.—This genus was originally described for five new species thought to be related to *Lispinus* and *Holotrochus* but distinguished by the body shape, which is broader and more like that of certain Tachyporinae. All five of these species were described as having the diagonal strigae on the abdominal sternites. Most of the species subsequently assigned to the genus had these diagonal strigae, but many species of *Lispinus* also had that character, and the two genera have been separated principally on the rather unsatisfactory difference in their shape.

I have found that some of the original species of *Holosus* (*tachiniformis*, *mycetoporiformis*, and *olisthaeriformis*) differ from one of the others in having the raised line on the hypomeron (the deflexed portion of the pronotum) enclosing a much larger and more transverse area, the angle of this line nearest to the coxa being distinctly acute, whereas in *tachyporiformis* it is right or obtuse. For the latter I am proposing the subgenus *Neolosus*, but the first group contains two very different pronotal types. *H. tachiniformis* has the pronotum transverse and strongly narrowed in front and is placed in the subgenus *Holosus* sensu stricto. *H. mycetoporiformis* and *olisthaeriformis* have the pronotum narrowed behind with the sides emarginate and are placed in the new subgenus *Relinda*.

I have seen only six species that can be retained in this genus as here defined.

Subgenus HOLOSUS sensu stricto

Diagnosis.—Having the characters listed above for the genus *Holosus*; pronotum not transversely impressed before base, strongly narrowed in front; hypomeron with a raised line forming an acute angle near the front coxa and enclosing a large and nearly transverse area.

Remarks.—This subgenus has a very distinctive form. It probably includes all the species that might be described as navicular, those

which depart most widely from the more general slender form of this tribe. I have seen only two species that belong here, *H. tachini-formis* and *H. navicularis* Cameron.

NEOLOSUS, new subgenus

Genotype.—*Holosus* (*Neolosus*) *tachyporiformis* Motschulsky.

Diagnosis.—Having the characters listed above for the genus *Holosus*; general form similar to subgenus *Relinda*; pronotum distinctly narrowed behind, transversely impressed before base; hypomeral line distinct but enclosing a longitudinal area, and with the angle near the coxa right or obtuse (and somewhat rounded).

Remarks.—*Holosus tachyporiformis* Motschulsky and *H. insularis* Fauvel differ so much from *H. tachini-formis* Motschulsky in the shape of the pronotum that I separate them under this name. Their form is rather similar to that of the other new subgenus *Relinda*, from which they differ in the hypomeral angles being not acute.

RELINDA, new subgenus

Genotype.—*Holosus* (*Relinda*) *mycetoporiformis* Motschulsky.

Diagnosis.—Having the characters listed above for the genus *Holosus*; hypomeron with a raised line forming a right or obtuse angle near the front coxa; mesosternum with a cavity with abruptly elevated sides for the reception of the tip of the prosternum.

Remarks.—This subgenus is proposed for the inclusion of two species of *Holosus* (*olisthaeriformis* and *mycetoporiformis*) that differ structurally from the types of *Holosus* sensu stricto and *Neolosus*, although having an appearance much like the species of *Neolosus*.

Genus PARALISPINUS Bernhauer

Ancaeus FAUVEL, Bull. Soc. Linn. Normandie, vol. 9, p. 60, 1865 (not Risso, 1816).
Paralispinus BERNHAUER, Deutsche Ent. Zeitschr., 1921, p. 67 (as a new name).

Remarks.—This genus is included here because it has almost invariably been confused with *Lispinus* or *Pseudolispinodes*. It was founded by Fauvel for a single species from Mexico (*megacephalus*), of which I have three examples from Guatemala and one fragmentary specimen from Costa Rica. Sharp, in the *Biologia Centrali-Americana*, recognized the unusual structure of the prosternum and anterior coxae, and the segregation of this genus (and certain others) on this character aids greatly in the study of the Lispinini (the Lispini of most writers).

I have examined six species that must at present be placed in this genus. These all occur in the Western Hemisphere with the exception of an undescribed species from central Africa. *P. exiguus*

Erichson is recorded from India, Ceylon, Assam, Singapore, New Guinea, and the Hawaiian Islands, as well as from the Americas, but examples from Singapore identified by Dr. Cameron are certainly *Pseudolispinodes* (subgenus *Nacaeus*). Whether the species actually occurs outside the New World I am unable to determine at present.

DESCRIPTIONS OF NEW SPECIES

PSEUDOLISPINODES (LIBERIELLA) COOKI, new species

Description.—Rufous, sometimes picescent in part. Head broadly rounded in front, a trifle broader behind the eyes, which are very feebly prominent; clypeus with a distinct marginal bead, which fades out at front of eye; with fine punctures separated by two to four times their diameter and with dense but fine scaly ground sculpture.

Pronotum about one-fourth wider than long, widest about middle, nearly straight and feebly converging posteriorly, feebly arcuate and rather indefinitely narrowed in front; feebly impressed at posterior angles, the depression extending about to middle; without foveae on front margin; punctures a little coarser than on head, separated by two to three times their diameters, without larger punctures; with obsolescent longitudinal ground sculpture.

Elytra at base as wide as base of pronotum, expanded to apical third; without obvious fovea inside humeral callus; with punctures finer than on head but slightly elongate, separated by two to four times their diameter; ground sculpture as on pronotum but a little more distinct; with a median discal punctiform fovea, excavated behind, at basal third and another subapical.

Abdomen punctured as elytra but less distinctly; ground sculpture scaly, more evident basally; a pair of punctiform foveae on each tergite at basal third, separated by one-third of width.

Length, $2\frac{2}{3}$ to 3 mm.

Types.—Holotype and nine paratypes (U. S. N. M. No. 52590), collected at Mount Coffee, Liberia, in March 1897 by Dr. O. F. Cook.

PSEUDOLISPINODES (LIBERIANA) FEMORALIS, new species

Description.—Piceorufous. Head broadly rounded in front, a trifle broader behind the eyes which are only moderately prominent; clypeus with a rather coarse marginal bead, which disappears at front of eye; feebly biimpressed between the antennal prominences; with fine punctures separated by two to three times their diameter but almost completely obscured by very coarse strigulose ground sculpture, which is not scaly but somewhat tortuous; with dense scaly sculpture behind the eyes.

Pronotum scarcely measurably wider than long, widest at anterior third, sides feebly rounded to front angles, abruptly but feebly converging behind from basal third; with well-defined fovea at basal angle extending almost to middle; disk flattened along middle; with two anterior submarginal foveae formed of posteriorly excavated punctures, and with a pair of large punctures correspondingly on the posterior margin; punctures a little coarser than on head, not so much obscured by the sculpture, which is less dense.

Elytra at base less than one-twelfth wider than base of pronotum, very feebly expanded to apical fourth; with very obtuse rounded fovea inside humeral callus; punctures finer than on head but equally obscured by the coarse and more regular strigulose ground sculpture; with a median discal punctiform fovea at basal third and another at apical sixth.

Abdomen with punctures of indeterminate size, more or less excavated behind, with traces of scaly ground sculpture inside the excavations; each tergite with a pair of large excavated foveae anteriorly, separated by one-third of the width (and others at sides and underneath).

Length, 6 to 7 mm.

Types.—Holotype and two paratypes (U. S. N. M. No. 52589) collected at Mount Coffee, Liberia, in February and March 1895 by Dr. O. F. Cook.

PSEUDOLISPINODES (RUMEBEA) LISPINOIDES, new species

Description.—Rufous. Head broadly arcuately truncate in front, a trifle wider behind the eyes, which are only slightly prominent; anterior margin finely beaded and extended as a ridge over the eye; almost entirely without prominences or depressions; with fine but somewhat irregular-sized punctures separated by two to four times their diameter; with ground sculpture obsolescent except at sides.

Pronotum three-fourths as long as wide, widest near middle, feebly narrowed behind with sides straight, feebly narrowed in front with sides feebly arcuate; depressed near hind angles but without distinct fovea or groove; disk not flattened; punctures as on head or more irregular, sometimes slightly elongate; without evident ground sculpture.

Elytra scarcely wider at base than base of pronotum, feebly expanded to middle half, which is parallel-sided; base without foveae; sutural band not abruptly elevated though distinct; punctures shallow, a little less distinct than on pronotum and a little sparser; ground sculpture obsolete.

Abdomen with punctures obsolete; scaly sculpture distinct at base of each tergite, obsolescent toward apex.

Length, 2½ mm.

Types.—Holotype and six paratypes (U. S. N. M. No. 52588), collected at Mount Coffee, Liberia, in February 1897, March 1895, and April 1894 by Dr. O. F. Cook. One paratype from Monrovia, Liberia, February 1895.

GENOTYPES OF THE LISPININI

- Ancaeus* Fvl., *A. megacephalus* Fvl. (monobasic).
Aneucamptus Shp., *Thoracophorus excisicollis* Mots. = *A. excisicollis* (Mots.) (monobasic).
Bothrys Fvl., *B. personatus* Fvl. (monobasic).
Calocerus Fvl., *Thoracophorus cicatricosus* Mots. = *C. cicatricosus* (Mots.) (designated here).
Chasolium Cast., *C. ernestini* Cast. (monobasic).
Clavilispinus Bnhr., *Paralispinus (Clavilispinus) siargaoanus* Bnhr. (monobasic).
Diplopsis Fvl., *D. multicosata* Fvl. (designated here).
Eleusis Cast., *E. tibialis* Cast. (monobasic).
Espeson Schauf., *E. moratus* Schauf. (monobasic).
Eumalus Shp., *E. strigosus* Shp. (designated here).
Glyptoma Er., *G. crassicorne* Er. (designated by Duponchel, 1841).
Holosus Mots., *H. tachiniformis* Mots. (designated here).
Ischiopsaurus Bnhr., *I. boettcheri* Bnhr. (designated here).
Isomalus Er., *I. humilis* Er. (designated by Duponchel, 1841).
Leipophorus Bnhr., *Thoracophorus (Leipophorus) minutissimus* Bnhr. (designated here).
Liberiana Blkwr., *Pseudolispinodes (Liberiana) femoralis* Blkwr. (original designation).
Liberiella Blkwr., *Pseudolispinodes (Liberiella) cooki* Blkwr. (original designation).
Lispinodes Shp., *L. explicandus* Shp. (monobasic).
Lispinus Er., *L. attenuatus* Er. (designated by Duponchel, 1841).
Nacaeus Blkwr., *Lispinus planellus* Shp. = *Pseudolispinodes (Nacaeus) planellus* (Shp.) (original designation).
Neolispinus Cam., *N. crucifer* Cam. (monobasic).
Neolusus Blkwr., *Holosus tachyporiformis* Mots. = *Holosus (Neolusus) tachyporiformis* Mots. (original designation).
Paralispinus Bnhr., *Ancaeus megacephalus* Fvl. = *Paralispinus megacephalus* (Fvl.) (Rules, Article 30, f).
Parespeson Bnhr., *Espeson (Parespeson) angustissimus* Bnhr. (monobasic).
Pseudolispinodes Bnhr., *Holosus madurensis* Bnhr. = *Pseudolispinodes madurensis* (Bnhr.) (designated here).
Relinda Blkwr., *Holosus mycetoporiformis* Mots. = *Holosus (Relinda) mycetoporiformis* (Mots.) (original designation).
Rhopalopherus Bnhr., *R. gestroi* Bnhr. (monobasic).
Rumeba Blkwr., *Pseudolispinodes (Rumeba) lispinoides* Blkwr. (original designation).
Spinilus Blkwr., *Lispinodes bistratus* Fvl. = *Lispinus (Spinilus) bistratus* (Fvl.) (original designation).
Stilbogastus Bnhr., *Thoracophorus nitidus* Bnhr. = *Thoracophorus (Stilbogastus) nitidus* Bnhr. (monobasic).
Tetrapleurus Bnhr., *T. indicus* Bnhr. (monobasic).
Thoracophorus Mots., *T. corticinus* Mots. (monobasic).

GENERIC ARRANGEMENT AND SPECIES EXAMINED

An attempt is here made to arrange the genera and subgenera in a natural order, beginning with what seem to be the least specialized. The following systematic list has been expanded to contain a list of the species that were examined in each genus and subgenus. In each case are given the original genus, the genus in which it has been recently placed (if different from the one to which it is herein assigned), a key to the authority for the specific identification, and an indication of the habitat of the species. Abbreviations as follows are used to indicate the authority for the identifications of the species listed:

Cam..... Dr. Malcolm Cameron. Various.. Several independent sources.
 Bnhr.... Dr. Max Bernhauer. Type.... Holotype.
 REB.... Dr. R. E. Blackwelder. PT..... Paratype.
 USNM... U. S. National Museum collections.

Pseudolispinodes Bnhr.Subg. *Pseudolispinodes* s. str.

- beesoni* Cam. 1924 (*Lispinus*) (Cam)..... India
birmanus Fvl. 1895 (*Lispinus*) (Cam)..... East India
castaneus Fvl. 1878 (*Lispinus*) (Cam)..... Australia, New Guinea
coarcticollis Kr. 1859 (*Lispinus*) (Cam)..... Singapore
curtipennis Bnhr. 1929 (*Lispinus*) (Bnhr)..... Borneo
fulvus Mots. 1857 (*Lispinus*) (Bnhr)..... East India, Philippines
impar Cam. 1913 (*Lispinus*) (REB)..... West Indies
impressicollis Mots. 1857 (*Lispinus*) (Bnhr).... Africa—Malay—Hawaii
luzoni Bnhr. 1914 (*Lispinus*) (Cam)..... India
luzonicus Bnhr. 1929 (*Lispinus*) (Bnhr)..... Philippines
madurensis Bnhr. 1915 (*Holosus*) (*Lispinus*, *Pseudolispinodes*)
 (Cam)..... India
nigrifrons Fvl. 1863 (*Lispinus*) (REB)..... West Indies
[nitidipennis] Bnhr. 1914 (*Lispinus*) (Bnhr) (part only; see
Lispinus)..... Philippines
quadripunctulus Fvl. 1865 (*Lispinus*) (USNM)..... Tropical America
rubidus Cam. 1925 (*Lispinus*) (Cam)..... Philippines
selangorensis Cam. 1929 (*Pseudolispinodes*) (*Lispinus*) (Cam).... Malay
sericeiventris Bnhr. 1914 (*Lispinus*) (Cam)..... Malay
specularis Bnhr. 1904 (*Lispinus*) (various)..... Malay
subopacus Kr. 1859 (*Lispinus*) (Cam)..... India, Malay
tenellus Er. 1840 (*Lispinus*) (REB)..... New World
 sp. (REB)..... Argentina
 sp. (REB)..... China
 sp. (REB)..... Japan
- Subg. *Liberiella* Blkwr.
aethiops Epp. 1895 (*Lispinus*) (Cam)..... Africa
cooki Blkwr. (Type)..... Liberia
 sp. (REB)..... Liberia
 sp. (REB)..... South Africa
- Subg. *Liberiana* Blkwr.
femoralis Blkwr. (Type)..... Liberia
 sp. (REB)..... Liberia

Pseudolispinodes Bnhr.—Continued.Subg. *Rumeba* Blkwr.*lispinoides* Blkwr. (Type)----- LiberiaSubg. *Nacaeus* Blkwr.[*exiguus* Er. (*Lispinus*) (Cam) (= *planellus* Shp.)----- Singapore][*nitidissimus* Bnhr. 1905 (*Ancaeus*) (*Paralispinus*) (various) (= *planellus* Shp)----- Singapore]*planellus* Shp. 1887 (*Lispinus*) (*Paralispinus*) (REB)----- Panama

sp. (REB)----- Panama

Lispinus Er.Subg. *Lispinus* s. str.*aequipunctatus* LeC. 1868 (*Lispinus*) (USNM)----- North America*attenuatus* Er. 1840 (*Lispinus*) (REB)----- West Indies*bakeri* Bnhr. 1914 (*Lispinus*) (Bnhr)----- Philippines*catena* Shp. 1876 (*Lispinus*) (REB)----- Tropical America*granadensis* Fvl. 1865 (*Lispinus*) (PT)----- Central America*insularis* Fvl. 1863 (*Lispinus*) (REB)--- Central America, West Indies*laticollis* Er. 1840 (*Lispinus*) (REB)----- Central America, West Indies*linearis* Er. 1840 (*Lispinus*) (USNM)----- New World*lineatopunctatus* Bnhr. 1929 (*Lispinus*) (Bnhr)----- Philippines*longipennis* Cam. 1925 (*Holosus*) (*Pseudolispinodes*) (Cam)--- East India[*nitidipennis* Bnhr. 1914 (*Lispinus*) (Bnhr) (part only; see *Pseudolispinodes*)----- Philippines]*parallelus* Bnhr. 1929 (*Lispinus*) (Bnhr)----- Borneo*quadrifollis* Cam. 1924 (*Lispinus*) (Cam)----- Northern India*quadrinotatus* Fvl. 1904 (*Lispinus*) (Bnhr)----- East India, Formosa*striola* Er. 1840 (*Lispinus*) (various)----- Tropical America*tardus* Shp. 1887 (*Lispinus*) (Bnhr, REB)--- Central America, West IndiesSubg. *Spinilus* Blkwr.*bistriatus* Fvl. 1895 (*Lispinodes*) (*Pseudolispinodes*) (various)--- India*sinuatus* Bnhr. 1904 (*Holosus*) (*Pseudolispinodes*) (Bnhr)--- Philippines*Holosus* Mots.Subg. *Holosus* s. str.*navicularis* Cam. 1936 (*Holosus*) (Cam)----- Java*tachiniformis* Mots. 1857 (*Holosus*) (Cam)----- JavaSubg. *Neolosus* Blkwr.*insularis* Fvl. 1904 (*Holosus*) (Bnhr)----- Borneo*tachyporiformis* Mots. 1857 (*Holosus*) (Cam)----- SumatraSubg. *Relinda* Blkwr.*mycetoporiformis* Mots. 1857 (*Holosus*) (Bnhr)--- East India, Philippines*olisthaeriformis* Mots. 1857 (*Holosus*) (REB)----- Philippines*Paralispinus* Bnhr.*californicus* LeC. 1863 (*Lispinus*) (various)----- North America*exiguus* Er. 1840 (*Lispinus*) (*Ancaeus*, *Paralispinus*) (REB)
New World, Africa*megacephalus* Fvl. 1865 (*Ancaeus*) (*Lispinus*) (Bnhr)--- Central America*politus* Shp. 1887 (*Ancaeus*) (REB)----- Central America, West Indies*prolixus* LeC. 1877 (*Ancaeus*) (*Lispinus*) (USNM)--- North America

sp. (REB)----- Panama

sp. (REB)----- Liberia